

## AGING AND DNA REPAIR

DNA damage has recently been proposed as a unifying cause of aging (see October 7 post). An article in [Science](#)<sup>1</sup> substantially reinforces this theory. The Pacific Ocean is home to several species of rockfish. Some have very long lifespans (up to 150 years), others much shorter (~20 years). The authors have compared their genomes in search of genes involved in providing a long lifespan. They found several longevity-associated genes that influence lifespan through insulin signaling and with pleiotropic effects through size and environmental adaptations. But the most interesting and relevant finding is the identification of repeated signatures of positive selection in DNA repair pathways in long-lived taxa, strengthening the hypothesis that accumulation of DNA damage is the primary and unifying cause of aging.

<https://www.science.org/doi/10.1126/science.abg5332>